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## A Dual-Readout Calorimeter with a Crystal ECAL for Future $e^+e^-$ Higgs Factories

*Thursday, March 18, 2021 2:40 PM (20 minutes)*

In the past, homogeneous electromagnetic calorimeters have allowed precision measurements of electrons and photons, while high granularity, dual-readout, and compensating calorimeters have been considered promising paths for improving hadronic measurements. In this talk, the possibility of using a homogeneous high-granularity crystal electromagnetic calorimeter using SiPMs photodetectors with a wavelength sensitivity with a spaghetti hadronic calorimeter with clear and scintillating fibers is explored using simulation. By employing wavelength and timing measurement in both calorimeters, the excellent electromagnetic resolution typical of crystal calorimeters is preserved, and the excellent hadronic resolutions are enabled for particle momentum ranges important to physics at future Higgs factories. We also discuss past experimental tests of components of this system, and plans for future integrated tests.

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